Methodology: A non-randomised prospective controlled study, involving 18 consecutive patients who acted as their own control was conducted to compare harmonic scalpel harvesting of the radial artery with conventional techniques.

Results: The harvest time was similar with the two techniques (harmonic 23.4 ± 6.4 vs. control 24.2 ± 2.5 min). Less clips were required (2.0 ± 1.4 vs. 39 ± 3.2, $p < .001$). There were significantly less wound haematomas in the harmonic group (0/18 vs. 4/18, $p = 0.04$). There was a lower incidence of thenar paraesthesia (0/18 vs. 4/18, $p = 0.04$). There was one wound infection in the control group (p = NS). No patients required reoperation for bleeding in either group.

Conclusions: We demonstrated that harmonic scalpel harvesting of the radial artery is associated with fewer complications and improved preservation of hand function.

doi:10.1016/j.jsha.2011.02.029

SHA 029. Efficacy of adipose derived stem cell in cardiac muscle repair

Mahmoud Abdelrahman Abu-Abeeleh, Khaled R. Alzaben, Sami A. Abu-Halaweh, Zuhair A. Bani ismail, Samir K. Jabaiti, Ismael Matalqa
University of Jordan, Cardiac Surgery, Amman, Jordan
E-mail address: abeelehm@ju.edu.jo (M.A. Abu-Abeeleh)

Methods: A total of 99 nude athymic rats (rnu/rnu) were used in the study. AMI Induced by occlusion of LAD. Rats were grouped into group I (receiving 0.2 ml of medium only). Group II receiving ventricular infusion of ADSC's soon after AMI/reperfusion. Group III ventricular infusion of ADSC's 5 days after AMI/reperfusion. Group IV ventricular infusion of ADSC's 5 days after AMI/reperfusion; and I.M. delivery of ADSC's 10 days after MI/reperfusion. Group V ventricular infusion of ADSC's soon after AMI/reperfusion; and I.M. delivery of ADSC's 10 days after AMI/reperfusion, and group VI I.M. delivery of ADSC's 10 days after AMI/reperfusion. The hearts were harvested at 10 days, 30 days, and 60 days after ADSC transplantation in each group.

Results: The control group animals showed a tendency toward granular tissue formation, active phagocytosis, variable angiogenesis when evaluated at 10 days, early fibrosis when evaluated at 30 days and, in some cases, established fibrosis when evaluated at 60 days. The treatment arms, however, showed a tendency toward cardiomyocyte regeneration, prominent angiogenesis when evaluated at 10 days, and reduction in the infarction size when evaluated at 60 days. Minimal scarring area was observed when compared to the control group.

Conclusions: Injection of adipose-derived stem cells decreased the amount of damage from myocardial infarction by assisting in the formation of functional myocardial cell. Fat tissue is an abundant and readily available source of endothelial progenitor and adult stem cells and is easily extractable from a patient using mildly invasive techniques.

doi:10.1016/j.jsha.2011.02.030

SHA 030. Can lung volumes and capacities been used as an outcome measures for phrenic nerve recovery after cardiac surgeries?

Prof. Dr.Naguib Mohamed Aly Salem, Dr.Salwa Elsokey
Faculty of Physical Therapy, Cairo Universilty, Cairo, Egypt
E-mail address: n_salem35@hotmail.com (N.M.A. Salem)

Phrenic nerve is the main nerve drive to the diaphragm and its injury is a well-known complication following cardiac surgeries. It results in diaphragmatic dysfunction with reduction in lung volumes and capacities. This study aimed to evaluate the objectivity of lung volumes and capacities as an outcome measure for the prognosis of phrenic nerve recovery after cardiac surgeries. In this prospective experimental study, patients were recruited from Cardio-Thoracic Surgery Department, Educational-Hospital of College of Medicine, Cairo University. They were 11 patients with right phrenic nerve injury and 14 patients with left injury. On the basis of receiving low-level laser irradiation, they were divided into irradiated group and non-irradiated group. Measures of phrenic nerve latency, lung volumes and capacities were taken pre and post-operative and at three-months follow up. After three months of low-level laser therapy, the irradiated group showed marked improvement in the phrenic nerve recovery. On the other hand, vital capacity and forced expiratory volume in the first second were the only lung capacity and volume that showed improvement consequent with the recovery of right phrenic nerve (P value < 0.001 for both). Furthermore, forced vital capacity was the single lung capacity that showed significant statistical improvement in patients with recovered left phrenic nerve injury (P value < 0.001). Study concluded that lung volumes and capacities cannot be used as an objective outcome measure for recovery of phrenic nerve injury after cardiac surgeries.

doi:10.1016/j.jsha.2011.02.031

SHA 031. Left ventricular myxoma with second primary left atrial myxoma

Nawal AlAbdulkarim
Prince Sultan Cardiac Center, Pediatric Cardiology, Riyadh, Saudi Arabia
E-mail address: dr_nabdulkarim@yahoo.com

15 years saudi girl presented at 9 years old with hemipraresis diagnosed by transthoracic echocardiography and pathology to have large left ventricular myxoma filling the whole left ventricle underwent successful resection with full recovery, after five years at routine follow up was diagnosed by echocardiopgraphy/CMR and pathology to have a left atrial myxoma without other clinical symptoms. She underwent successful resection.

Conclusion: Myxoma can be multiple or recurrent and follow up by echocardiography/CMR postresection is indicated.

doi:10.1016/j.jsha.2011.02.032

SHA 032. Options of repair for ischemic mitral valve regurge

Ahmed Aboul-Azm, MD
Cairo, Egypt

Introduction: Severe and moderately severe Ischemic mitral valve regurge in patients with moderate or poor left ventricular impairment – whom showed no improvement on the reguge aspect in stress echocardiogram – should be subjected to mitral repair in concomitance with CABG or ventricular restoration procedures.

Methods: Thirty five patients had posterior annuloplasty using gluteraldhide pretreated native pericardial ribbon w/without Alfieri Stitch w/without CABG or SVR and followed up 3 months by echocardiogram.

Results: The degree of mitral repair was significantly reduced in all patients especially those with combined Alfieri stitch with posterior annuloplasty immediately and 3 months follow up, also in posterior annuloplasty with CABG for good targets.